

CLAIMS

1. A casting die (10) comprising:

5 a main body (12) having a wall surface for defining a mold cavity; and

a cavity forming member (14) having a wall serving as a portion of the mold cavity;

said main body (12) being made of steel;

10 said cavity forming member (14) being made of a material which is better with respect to at least one of toughness, hardness, and thermal conductivity than the steel which said main body (12) is made of.

15 2. A casting die (10) according to claim 1, wherein said main body (12) is made of an SCM material or an SKD material, and said cavity forming member (14) is made of a material selected from the group consisting of maraging steel, an SKH material, a copper alloy, and a ceramic material.

20 3. A casting die (10) according to claim 1 or 2, wherein said cavity forming member (14) is provided as an insert die.

25 4. A casting die (10) according to any one of claims 1 to 3, wherein said mold cavity is bent or curved from a gate for receiving an introduced molten metal, and said cavity

forming member (14) is disposed in a position closest to said gate.

5 5. A method of manufacturing a casting die (10) having a main body (12) having a wall surface for defining a mold cavity, and a cavity forming member (14) having a wall serving as a portion of the mold cavity, comprising the steps of:

10 forming a main body (12) of steel with a mold cavity defined thereby;

defining a recess (32) in a portion of said mold cavity; and

15 placing a cavity forming member (14) made of a material which is better with respect to at least one of toughness, hardness, and thermal conductivity than the steel which said main body (12) is made of, in said recess (32) in said main body (12).

20 6. A method of manufacturing a casting die (10) having a main body (12) having a wall surface for defining a mold cavity, and a cavity forming member (14) having a wall serving as a portion of the mold cavity, comprising the step of:

25 placing, in a portion of the mold cavity in the main body (12) which has been used in a casting process, a cavity forming member (14) made of a material which is better with respect to at least one of toughness, hardness, and thermal

conductivity than steel which said main body (12) is made of.

5 7. A method according to claim 5 or 6, wherein said cavity forming member (14) comprises an overlay deposited by welding.

10 8. A method according to claim 5 or 6, wherein said cavity forming member (14) comprises an insert die fitted in or joined to said main body (12).

15 9. A method according to any one of claims 5 to 8, wherein said mold cavity is bent or curved from a gate for receiving an introduced molten metal, and said cavity forming member (14) is disposed in a position closest to said gate.